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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/728,930	12/04/2000	Yoshiro Yamazaki	Q61627	2826

7590 09/20/2004

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EXAMINER

SHERRILL, JASON L

ART UNIT PAPER NUMBER

2622

DATE MAILED: 09/20/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Non-Final?

# Office Action Summary

Application No.

09/728,930

Applicant(s)

YAMAZAKI, YOSHIRO

Examiner

Jason L. Sherrill

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-19 and 21-30 is/are rejected.
- 7) ☒ Claim(s) 8 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 4/19/04 have been fully considered but they are not persuasive. Applicant argues that the primary reference, Deschuytere et al. (U. S. Patent No. 6,160,643), does not disclose correcting for reading discrepancies in the reading device by applying data correction values to the electronic information corresponding to each area as cited in claims 1 and 13. The examiner respectfully disagrees. Deschuytere discloses a system wherein the gain and voltage are adjustable based on the bits per pixel of the system, and the density range of the scanner to be scanned (col. 9, lines 9-19). The system, which generates eight bits, a pixel (compared to a twelve bit per pixel system) is able to adjust the gain and voltage to compensate for the reading discrepancies of an eight-bit system (col. 9, lines 19-22; col. 9, line 50 – col. 10, line 35). Applicant also argues that Deschuytere fails to disclose that the image reading device is used to read a predetermined image and produce electronic information representing the predetermined image. However, Deschuytere discloses an image reading device wherein a predetermined reference film is scanned and a transformation matrix representative of the reference film is obtained (col. 20, lines 4-45).

For claims 2 and 14, Applicant argues that Deschuytere does not teach the predetermined image having a spectral absorption characteristic approximate to that of

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the original. Deschuytere discloses a characteristic curve of a reference film of the same type by matching the densities at fog level of the reference film and the film to be digitized (col. 20, lines 20-28).

Applicant's arguments, with respect to claims 8 and 20 have been fully considered and are persuasive. The rejection of claims 8 and 20 has been withdrawn. Applicant's arguments with respect to the rejection(s) of claim(s) 9 and 21 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Loushin et al. (U. S. Patent No. 6,462,835).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371 (c) of this title before the invention thereof by the applicant for patent.

3. The changes made to 35 U.S. C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U. S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S. C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U. S.C. 102(e)).

4. Claims 1-4, 8, 11-16, 20, 23-26, 28, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Deschuytere et al. (U. S. Patent No. 6,160,643).

For claims 1 and 13, Deschuytere discloses an apparatus and method comprising, a reading device having a plurality of photoelectric conversion cells (42, Fig. 1; col. 8, lines 50-54), which receive light transmitted through or reflected from an original (col. 8, lines 41-44), and produce electronic information representing the image as a plurality of pixels (col. 9, lines 5-22); and a data processing system electronically connected to the reading device and receiving the electronic information therefrom (col. 8, lines 26-54), the data processing system including a memory and logic (col. 7, lines 27-31), the logic defining the electronic information being divided into a plurality of areas, with each area comprising a plurality of pixels (col. 9, lines 511), and corrects for reading discrepancies in the reading device by applying data correction values to the electronic information corresponding to each area (col. 9, lines 11-22), with the data correction values stored in the memory (col. 7, lines 27-31), and previously obtained by reading a predetermined image of at least one type corresponding or similar to the original (col. 20, lines 30-37).

For claims 2 and 14, Deschuytere discloses an apparatus and method wherein the predetermined image of the type corresponding or similar to the original has a spectral absorption characteristic approximate to that of the original (col. 20, lines 20-28).

For claims 3 and 15, Deschuytere discloses an apparatus and method wherein the reading device includes at least one type of color filter for producing electronic image information corresponding to a plurality of color separated components (col. 20, lines 20-28), wherein there are data correction values stored in the memory for each of the color components, and the logic applies data correction values in accordance with each of the color components to the electronic information representing the original (col. 8, lines 43-47).

For claims 4 and 16, Deschuytere discloses an apparatus and method wherein the reading device is configured to read the original by separating the original into a plurality of color components using a color separation filter (col. 8, lines 43-47), and dispersion of the spectral absorption characteristic in a reading area of the reading device is caused at least by dispersion of a characteristic of the color separation filter in the reading area of the reading device (col. 8, lines 50-59)

For claims 11 and 23, Deschuytere discloses an apparatus and method wherein the data correction values corresponding to the areas, correspond to a plurality of regions forming each area, with the quantity of regions forming each area being less than the quantity of pixels forming that area, and the logic determines a correction for each pixel on that area by interpolation (col. 13, lines 14-21).

For claims 12 and 24, Deschuytere discloses an apparatus and method wherein the predetermined original includes areas of different image densities, and the logic applies the data correction values to the electronic information received for the original based on the density of data (col. 10, lines 37-65).

For claims 25 and 26, Deschuytere discloses wherein the light source is only located on a side of the original opposite to the other side of the original facing the reading device (36, Fig. 1; col. 8, lines 26-46).

For claim 28, Deschuytere discloses wherein the data processing system is correcting reading discrepancies based on characteristic of hardware in the apparatus (col. 9, lines 3-38).

For claim 29, Deschuytere discloses the discrepancies comprise spectral shift caused by the hardware (col. 5, lines 7-10).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5 and 17 are rejected under 35 U. S. C. 103 (a) as being unpatentable over Deschuytere et al. (U. S. Patent No. 6,160,643) as applied to claims 1, 3, 4, 13, 15, and 16 above, and further in view of Shimizu et al. (U.S. Patent No. 5,489,989).

For claims 5 and 17 Deschuytere fails to teach that the reading device is a line sensor.

Shimizu discloses an image processing apparatus and method wherein the reading device is a line sensor (20c, Fig. 1; col. 3, lines 5-15). It would have been

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obvious to one of ordinary skill in the art at the time the invention was made to combine the line sensor of Shimizu and the color negative scanner of Deschuytere because both teach image processing apparatuses which store image correction data before scanning the original image. The improvement on Deschuytere by Shimizu would allow for a more versatile image reading device.

7. Claims 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deschuytere et al. (U.S. Patent No. 6,160,643) as applied to claims 1 and 13 above, and further in view of Suhr et al. (U.S. Patent No. 6,466,337).

For claims 6 and 18, Deschuytere fails to disclose that the reader comprises a light source section comprising a plurality of point light sources or line light sources, wherein the reading device reads the original by using light emitted from the light source section and transmitted through or reflected from the original.

Suhr discloses a reader which comprises a light source section comprising a plurality of point light sources or line light sources, wherein the reading device reads the original by using light emitted from the light source section and transmitted through or reflected from the original (8, Fig. 1; col. 3, lines 33-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the plural light sources of Shimizu and the color negative scanner of Deschuytere because both disclose a process for calibrating a scanner prior to scanning an original. The improvement on Deschuytere would allow for better illumination of documents to be scanned therefore better scan quality.



8. Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deschuytere et al. (U. S. Patent No. 6,160,643) as applied to claims 1 and 13 above, and further in view of Koretsune et al. (U.S. Patent No. 6,501,087).

For claims 7 and 19, Deschuytere fails to disclose that the light source section comprises of LEDs as light emitting sources, wherein the reading device reads the original by using light emitted from the light source section and transmitted through or reflected from the original.

Koretsune discloses light source section comprising of LEDs as light emitting sources, wherein the reading device reads the original by using light emitted from the light source section and transmitted through or reflected from the original (col. 4, lines 13-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the LED light sources of Koretsune and the scanner of Deschuytere because both teach image reading apparatuses which use light sources to illuminates originals to be scanned. The improvement on Deschuytere by Koretsune would allow for an efficient and cost effective light source.

9. Claims 9 and 21 are rejected under 35 U. S. C. 103 (a) as being unpatentable over Deschuytere et al. (U.S. Patent No. 6,160,643) as applied to claims 1 and 13 above, and further in view of Loushin et al. (U. S. Patent No. 6,462,835).

For claims 9 and 21, Deschuytere fails to disclose an original being a photographic film including a code recorded on the film, or the original is a photographic

New  
Rejection

film accommodated in a cartridge with the code recorded on the cartridge, and the reading device reads the code and produces electronic information corresponding to the code, and the information processing system receives the electronic information corresponding to the code and retrieves from the memory, data correction values for a photographic film corresponding to that code.

Loushin discloses an original being a photographic film including a code recorded on the film, and the reading device reads the code and produces electronic information corresponding to the code, and the information processing system receives the electronic information corresponding to the code and retrieves from the memory, data correction values for a photographic film corresponding to that code (col. 7, lines 37-59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the scanner of Loushin and the scanner of Deschuytere because both disclose film scanners capable of using image processing generate correction values for the film being scanned. The improvement on Deschuytere by Loushin would allow for an efficient way to identify film characteristics.

10. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deschuytere et al. (U. S. Patent No. 6,160,643) as applied to claims 1 and 13 above, and further in view of Brandestini et al. (U. S. Patent No. 6,044,180).

For claims 10 and 22, Deschuytere fails to disclose a user input device electronically connected to the information processing system, for entering information identifying the original type, which is received by the information processing system,

and the logic retrieves from the memory data correction values corresponding or similar to that type.

Brandestini discloses a user input device electronically connected to the information processing system, for entering information identifying the original type, which is received by the information processing system, and the logic retrieves from the memory data correction values corresponding or similar to that type (col. 10, lines 48-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the user input of Brandestini and the scanner of Deschuytere because both disclose scanners capable of reading transparent documents. The improvement on Deschuytere by Brandestini would allow for a user to specify the type of film being used and therefore the proper correction data can be used.

11. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deschuytere et al. (U. S. Patent No. 6,160,643) as applied to claim 1 above, and further in view of Edgar (U. S. Patent No. 5,266,805).

For claim 27 Deschuytere fails to disclose a turret for rotating so that color separation filters are positioned on an optical axis.

Edgar discloses a turret for rotating so that color separation filters are positioned on an optical axis (38, Fig. 2; col. 7, lines 16-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the scanners of Deschuytere and Edgar because both disclose systems for scanning negative film. The

improvement on Deschuytere by Edgar would allow for a more efficient way to implement color separation filters.

12. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deschuytere et al. (U. S. Patent No. 6,160,643) as applied to claim 1 above, and further in view of Yamakawa (U. S. Patent No. 5,892,595).

For claim 30, Deschuytere fails to disclose the plurality of areas comprising spatial adjacent areas and are corrected by interpolation from adjacent areas.

Yamakawa discloses plurality of areas comprising spatial adjacent areas and are corrected by interpolation from adjacent areas (col. 9, lines 5-21; col. 10, line 39 – col. 11, line 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the scanning system of Deschuytere with the image processing apparatus of Yamakawa because both disclose image reading apparatuses capable of scanning and processing original documents. The improvement on Deschuytere by Yamakawa would allow for better image quality through the use of interpolation.

#### ***Allowable Subject Matter***

Claims 8 and 20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Takaoka (U.S. Patent No. 6,473,535) discloses an image processing apparatus.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900. Any inquiry concerning this communication or earlier communications


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from the examiner should be directed to Jason L. Sherrill whose telephone number is 703-306-4053. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L Coles can be reached on 703-305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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